

The hidden depths of data lakes

SmartStream is a company committed to delivering tangible outcomes for its financial services clients, many of which are embracing the transition to cloud-based managed services. Handing over crucial functions to a third party requires trust in the technology infrastructure and the service delivery. Nick Smith, head of managed services at **SmartStream**, tells *Future Banking* how the company's commitment to constant evolution helps to build that trust.

There are few positives to be gleaned from the Covid-19 pandemic – but a silver lining might be the acceleration of the financial services industry's journey towards digitalisation. In an age of remote working, contactless payments and Zoom calls, digital life has finally become the norm, not the exception.

Banks have been exploring the potential of cloud-based services in recent years but have always been careful to make changes gradually. Their faith in the cloud has to be built on robust security protocols, process efficiency and close collaboration with their partners in service delivery. Now, their approach to outsourcing must keep up with the changing times.

"I am a believer in hard data, not emotional statements," says Nick Smith, executive vice-president at SmartStream and head of its managed services business. "The data is showing that growth in demand for managed services is as strong as ever and 2020 was a record year for us. That trend is carrying on in 2021, and we continue to expand our managed services offering all the time."

SmartStream has become a trusted partner in the financial services industry for the delivery of cloud-based and managed services solutions – and it is constantly moving more of its market-leading solutions into its managed services portfolio.

One key pillar of its managed services offering is SmartStream AIR, a reconciliation platform powered by artificial intelligence (AI), which can match any data sets – structured or unstructured – in seconds rather than weeks. That makes it the fastest cloud-native, pure AI-data quality application available.

The most recent addition to the managed services cloud family is Affinity, an observational learning solution designed to improve operational data management and data quality processes. Driven by machine learning (ML) capability, Affinity observes how users work and learns from them to automate

the optimisation of workflow for individual users of the company's solutions.

These solutions are immediately accessible to clients of SmartStream managed services, along with powerful tools for reconciliations, corporate actions processing, collateral management, cash and liquidity management, fees and expense management, and reference data. Now, Smith and his team are adding the next layer of functionality – data lakes.

Data at your fingertips

Data lakes act as centralised repositories, allowing clients to store all of their structured and unstructured data at any scale. SmartStream's latest version of AIR, which is designed to support global clients on both the Microsoft Azure platform and on Amazon Web Services (AWS), comes with full 'data lake' support, which enables clients to integrate reconciliations and run custom reports using analytical tools that can mine all of the data they have collected.

"Banks want to mine their data and do enhanced regulatory reporting, so we are publishing their information into data lakes, hosted through our managed services offering, which provides an additional layer of service that gives our clients more flexibility in how they use their data," says Smith. "It is a very exciting development, and we are just in the process of building the first data lake for a client now."

The data lake feature will allow clients to develop deeper insights from the wealth of data they collect during the reconciliation process, using tools such as Tableau and Microsoft Power BI. Among the end results are optimised workflows and even better matching rates.

SmartStream relies heavily on Oracle systems, and it is now using more Oracle capability to extract and migrate data to Amazon Redshift, which is the fastest

and most widely used cloud data warehouse. Redshift integrates with a client's data lake and makes it simple to both query data and write data back to the lake in open formats.

"We are extending our use of Amazon Web Services and Oracle and delivering that capability through our managed services portfolio," says Smith. "That delivers not only the regulatory reporting capability that clients need, but also gives them much more flexibility in terms of how they can mine their data."

The advantage of incorporating data lakes into the managed services portfolio is that SmartStream clients can easily ramp up the use of the company's comprehensive suite of cloud-based solutions to handle any kind of query or reporting requirement.

"Reports can be tailored to any criteria, and some will require a lot of compute power, but we can control that at our end to ensure that we reduce the possibility of compromising the available compute power for other end users," Smith adds.

Swift, secure and fully flexible

Smith understands well the challenges of reporting, data management and workflow optimisation – not only from his four years at SmartStream, but also from his time working in the financial services sector. His first-hand knowledge comes from a career

spanning 25 years, many of which were spent at leading investment banks.

Over that time, he's built up an impressive knowledge of process management, solution development, risk management and control, and the development of centres of excellence. He has applied this knowledge to understanding banks' pain points and ensuring that SmartStream's managed services meet those challenges head-on.

"Years ago, when I was working in banks, I saw them pour a lot of money into creating data lakes," he observes. "It would cost them millions of dollars. Now, that capability can be easily accessed through our managed services offering."

Just recently, Smith was approached by an existing client who had installed SmartStream solutions at their premises. The bank was experiencing a crucial technology issue – its systems were running slow and this was slowing down its ability to generate new reports. It had all the data but generating useful insight from that data was holding it back from making informed business decisions.

"We identified that the client was not managing its production database of transactions," says Smith. "Users were just trying to do their job, but they are not aware of the impact on the bank's systems of running queries on the database. With managed



services, I can control the amount of compute power a user can access.”

Through a managed services engagement, clients can easily scale up their access to SmartStream’s solutions, eliminating the need to build and maintain their own technology infrastructure at great expense. They are handing over their systems infrastructure to a service provider with in-depth knowledge of the cloud and of banks’ service requirements, as well as the ability to leverage AI and ML to address specific operational needs.

“With a data lake, the amount of data does not matter,” Smith adds. “Any new data goes straight into the data lake and it is still available in real time. There is no data lag. So, it is a lot more flexible. Clients have reliable, real-time access to that data and can easily query it in any way they choose.”

Added to that, clients can take advantage of TLM View, which SmartStream launched three years ago and allows clients to design self-service dashboards. Not only is all of their data readily available, but users can configure how they view that data to meet their own specific needs.

Built around the customer

The curation of the managed services portfolio, the development of the solutions it contains and the cloud-based architecture on which it is delivered, reflects the fundamental ethos of SmartStream – constant innovation to keep pace with market trends.

“Clients come to us with challenges, and they ask us to solve them,” says Smith. “Banks have always had

limitations on their reporting capability and creating new reports comes with a cost. Now, it is much easier for them, and it has no impact on productivity.”

From his time working in the banking sector, Smith knows that there are some issues that take precedence over all others. In the age of digitalisation, security is one such topic. No matter how seamless the service delivery, and how slick the solutions, if an outsourcing partner cannot keep a bank’s data completely secure, then everything falls apart.

Understandably, security has become as important an issue for SmartStream as it is for its clients. In July 2020, SmartStream achieved Payment Card Industry Data Security Standard (PCI-DSS) certification version 3.2.1, level one – the highest level. This means that it is certified against one of the most trusted and, in many instances, mandatory qualifications for solution providers.

SmartStream’s reconciliation platform and its on-demand software as a service (SaaS) capabilities – encompassing many of its flagship solutions, including TLM Reconciliations, TLM Aurora and AIR – have all been certified to the highest level of security standards.

SmartStream has now begun to offer its clients a service designed to specifically test how secure their data is. This involves simulating a cyberattack on a computer system in order to discover vulnerabilities and potential points of exploitation. Usually, a bank would engage a third-party specialist to conduct this testing, but it is now key to SmartStream’s offerings.

“As demand for managed services is growing, we are partnering with third-party vendors to handle penetration testing – known as ‘pen testing’ – which means it becomes another part of the service we offer,” Smith explains. “The process is done with full impartiality, so it enables our clients to show regulators that their data is fully secure but without having to organise their own pen testing exercises.”

For Smith, this is indicative of the company’s approach, which does not try to build new capability in-house and then persuade clients they need it, but rather looks first at the challenges, banks are facing and the cumbersome tasks they must execute, and then defines how SmartStream’s AI, ML and cloud-based technologies can best be applied to solve those problems.

“It is all about the outcome for the client, and all of our developments are based on client feedback,” Smith says. “We are always driving change. Everyone is moving to cloud services now and we can help them with that transition. If I were in a bank and I were looking to do something strategic, it could take a year from RFP to vendor selection and implementation. With our constantly evolving managed services offering, that transition is much quicker.” ●

